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CROPPING SYSTEMS

by

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CROPPING SYSTEMS

Many different cropping systems are used in South Dakota. In part of the "West-River" country it is customary to raise equal acreages of corn and small grain. The corn is planted with a lister and the small grain disced in on the corn stubble the next year. Very little plowing is done. In Spink County, typical of the north-western part of the State, there are three acres of small grain for each acre in corn. Surveys in Brown County and Jones County in 1921 show very different cropping systems prevailing in those counties. #

Kind of crop		65 farm in Brown County-1921	61 Farm in Jones County-1921
Wheat	acres	203	16
Corn	"	61	55
Oats	"	36	20
Barley	"	26	7
Miscellaneous	"	6	3
Tame hay	"	12	41
Wild Hay	"	29	108
Pasture	"	85	812

Figures gathered by the State Department of Agriculture.

We used to hear a good deal about "crop rotation", and we were taught that every good rotation should contain a cultivated crop, a grain crop and a legume for hay or pasture. The second cutting of hay or the pasture crop was plowed under to maintain or increase the fertility of the soil.

NOTE: One of the best bulletins on this subject is entitled, "Dry Farming in Western South Dakota". It may be had by writing to the State College or the United States Department of Agriculture for Farmers' Bulletin No. 1163.

In parts of South Dakota, because of insufficient moisture, this so-called "green manure" does not rot before the next crop year and the ground dries out. For this reason, and because alfalfa, which is our most popular tame hay and pasture crop, does not fit into a short rotation, this standard form of rotation is not widely practiced.

Since in most parts of the State we do not find definite crop rotations that include the three types of crops mentioned as constituting an ideal rotation; namely, a cultivated crop, a grain crop, and a leguminous hay or pasture crop, it might be well to speak of them as "cropping systems" instead of as rotations. There are a number of tests which should be applied to every cropping system and which it must pass. It must:

- (a) Fit the locality
- (b) Avoid heavy peak loads of labor
- (c) Provide feed crops for livestock
- (d) Include cash crops for sale, and
- (e) Keep down weeds

Cropping System Should Fit Locality

There are several ways in which a cropping system should fit the locality. The crops grown should be such as are well adapted to the climate and soil of the region. Drought-resistant varieties should be grown in the drier parts of the State. The distance from a local market or shipping point will often modify the cropping system.

For example, if a farm is 30 miles from a railroad, then its crops should be fed to livestock and marketed on the hoof, unless perhaps some high-priced seed, like flax or alfalfa seed, will justify the long haul to market. On the other hand, a farm located near a shipping point might market its crops largely as grain or as dairy products.

Avoid Peak Loads of Labor

In planning a cropping system it is well to avoid heavy peak loads of labor at certain times of the year. Wheat calls for a good deal of work in April and August, while corn makes its heaviest demand for labor during June and July. It is not usually possible to entirely avoid these rush seasons, but they are very expensive. They mean that extra men must be hired, often by the day and at high wages. They mean that extra horses must be kept during the entire year just for the few days work they do at these times. Alfalfa is a good hay crop, but in parts of South Dakota the first cutting is usually ready when every available man and team is cultivating corn. For this reason the later-maturing, though often inferior native grasses are used for hay. Winter rye is a good example of a crop that fits in well with those usually grown in South Dakota. It is sown in September or October after the harvest rush is over and is cut in July after the corn is laid by and before the other small grain is ready to harvest. One requirement of a good cropping system, then, is that it should distribute the demand for labor as evenly as possible throughout the year.

Provide Feed Crops for Livestock

A good cropping system should provide all of the roughage (pasture, hay, fodder) and a large part of the coarse grains (corn, oats, barley) needed by the livestock kept on that particular farm. This is good business practice as home-grown feeds are usually cheaper than those which are purchased. These feeds are bulky and the cost of hauling and transporting them is great. Not only is it best to raise all of the roughage and most of the grain for one's stock, but it is well to carry over a surplus of these feeds from one year to another. This protects against a short-crop season and is very good insurance.

Cash Crops for Sale

There is an old story about the man who "raised more corn to feed more hogs to buy more land to raise more corn to feed more pigs, etc." A good cropping system should include "cash crops" for sale, even if some of the soil fertility is removed with them. We hear a good deal about "soil-robbers" now-a-days. But when it comes to making a good living, paying off a mortgage and maintaining soil fertility, the first two items come first and on most farms it takes cash crops as well as livestock sales to realize them. While this is true, there are many farms in South Dakota where too large a proportion of the income is derived from the sale of crops and where a better balanced system of farming, which includes more livestock, would yield a higher net income.

Keeping Down Weeds

Any cropping system that permits weeds to come into the fields and take possession of the land is hardly worthy the name of cropping system. When it comes to keeping the land relatively free from weeds, the old-fashioned rotation which included a cultivated crop, a grain crop, and a hay or pasture crop, is one of the very best cropping systems which could be devised. Corn and potatoes are excellent weed killers because of the intensive cultivation which they receive. Winter grain is good, especially when the stubble is plowed immediately after harvest.

The blank on the following page should be filled out at the club meeting. Methods of eradicating the following weeds may also be discussed:

- | | |
|-----------------|--------------------|
| (a) Sow Thistle | (d) Yellow Mustard |
| (b) Wild oats | (e) Cocklebur |
| (c) Quack Grass | (f) Bindweed |

What cropping system are you following? What do you consider an ideal system for your locality?

Fill out first the column headed "My Farm" and then the column "Ideal Farm for this Locality".

Item	My Farm	Ideal Farm for this Locality
1. Acres in farm.....	!	!
2. Acres in corn.....	!	!
3. Acres in wheat.....	!	!
4. Acres in oats.....	!	!
5. Acres in barley.....	!	!
6. Acres in flax.....	!	!
7. Acres in rye.....	!	!
8. Acres in potatoes.....	!	!
9. Acres in pasture, native grass.....	!	!
10. Acres in pasture, alfalfa, etc.....	!	!
11. Acres in meadow, native grass.....	!	!
12. Acres in meadow, alfalfa, etc.....	!	!
13.	!	!
14.	!	!
15.	!	!
16. How many cows (beef and dairy).....	!	!
17. How many other cattle (young and old).....	!	!
18. How many brood sows.....	!	!
19. How many work horses.....	!	!
20.	!	!